

Update of Nutrition Indicators for Biodiversity (NIB) – 1. Food Composition and 2. Food Consumption

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Background and objectives

With rising recognition of food biodiversity and its importance for nutrition, agriculture and health, a tool is needed for monitoring the data availability for biodiverse foods (food composition and food consumption). Therefore, two Nutrition Indicators for Biodiversity (NIB) were developed.

Methods

Since 2008, data on foods counting for biodiversity i.e. foods identified below species level (at variety/cultivar/breed level) as well as wild and underutilized foods were collected either by FAO or by members of the INFOODS network. NIB1 (composition) is a count of the number of biodiverse foods with at least one value for a nutrient or other bioactive component, while NIB2 (consumption) captures the number of biodiverse foods reported in consumption surveys and the number of surveys with at least one reported biodiverse food. Reporting on NIB1 is done yearly and on NIB2 every second year.

Food Composition – NIB1

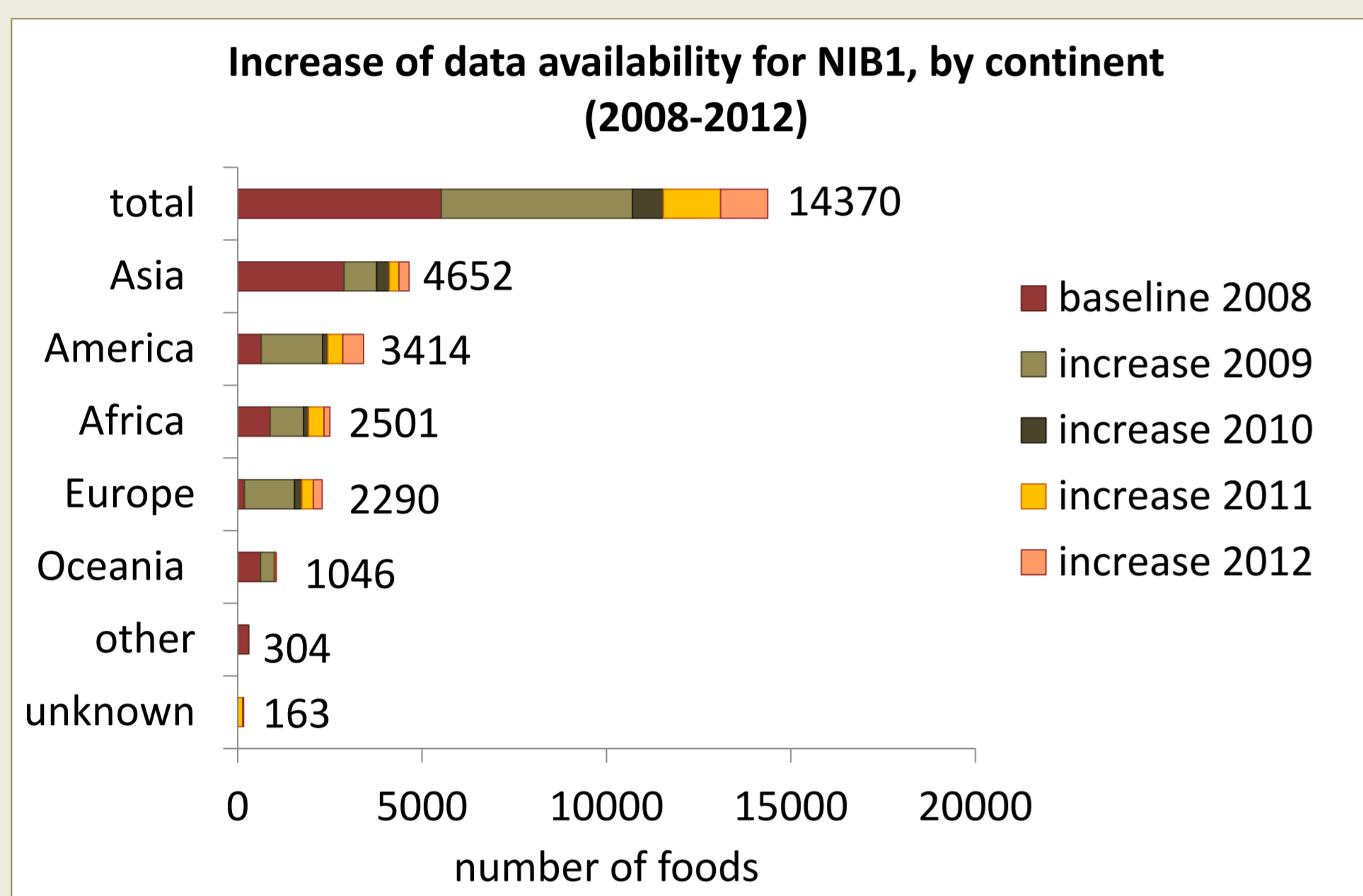


Fig.1: Yearly increase of the number of foods counted for NIB1 between 2008 and 2012 categorized by continent.

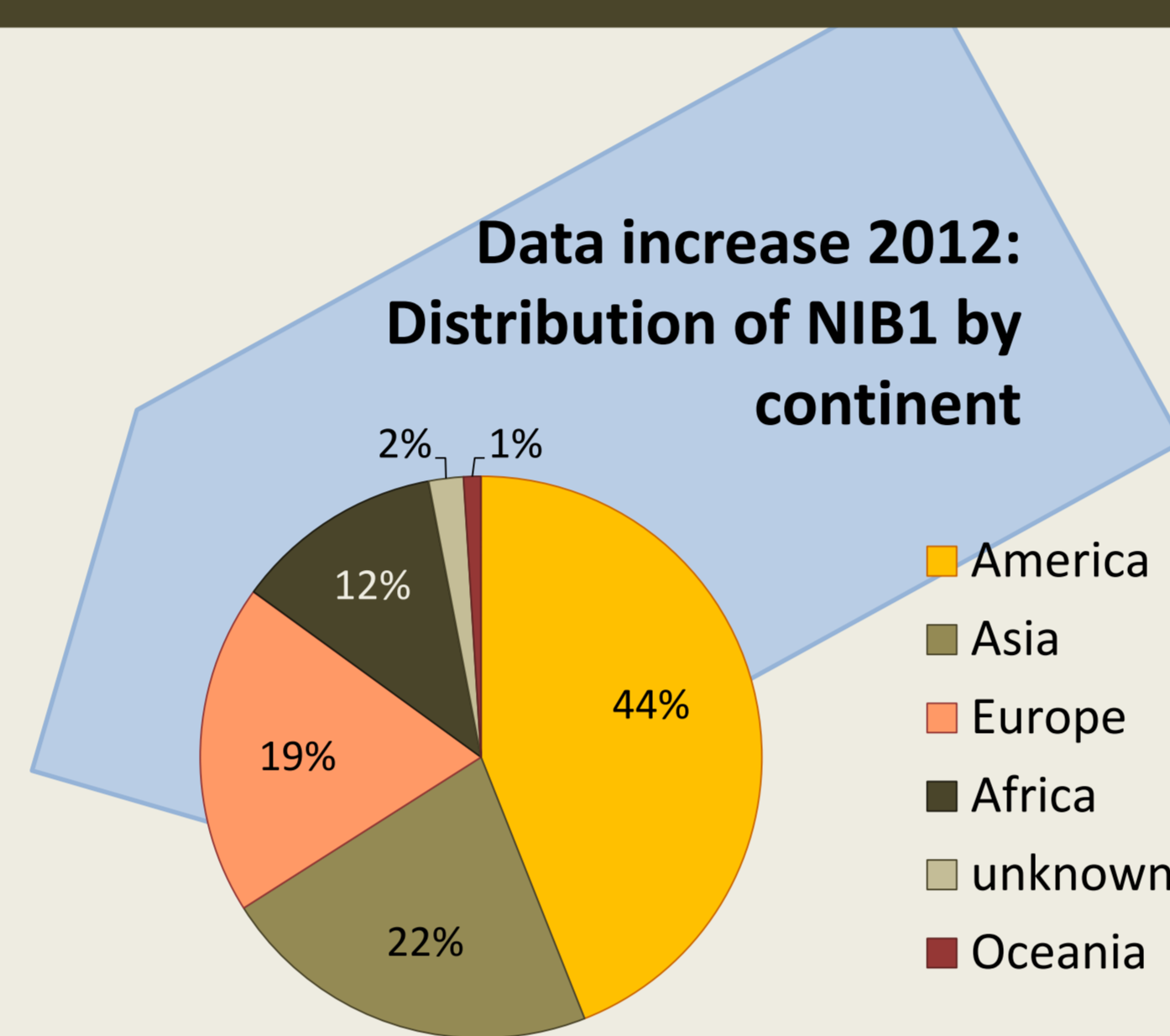


Fig.2: Number of foods counted for NIB1 in 2012 categorized by continent.

Food Consumption – NIB2

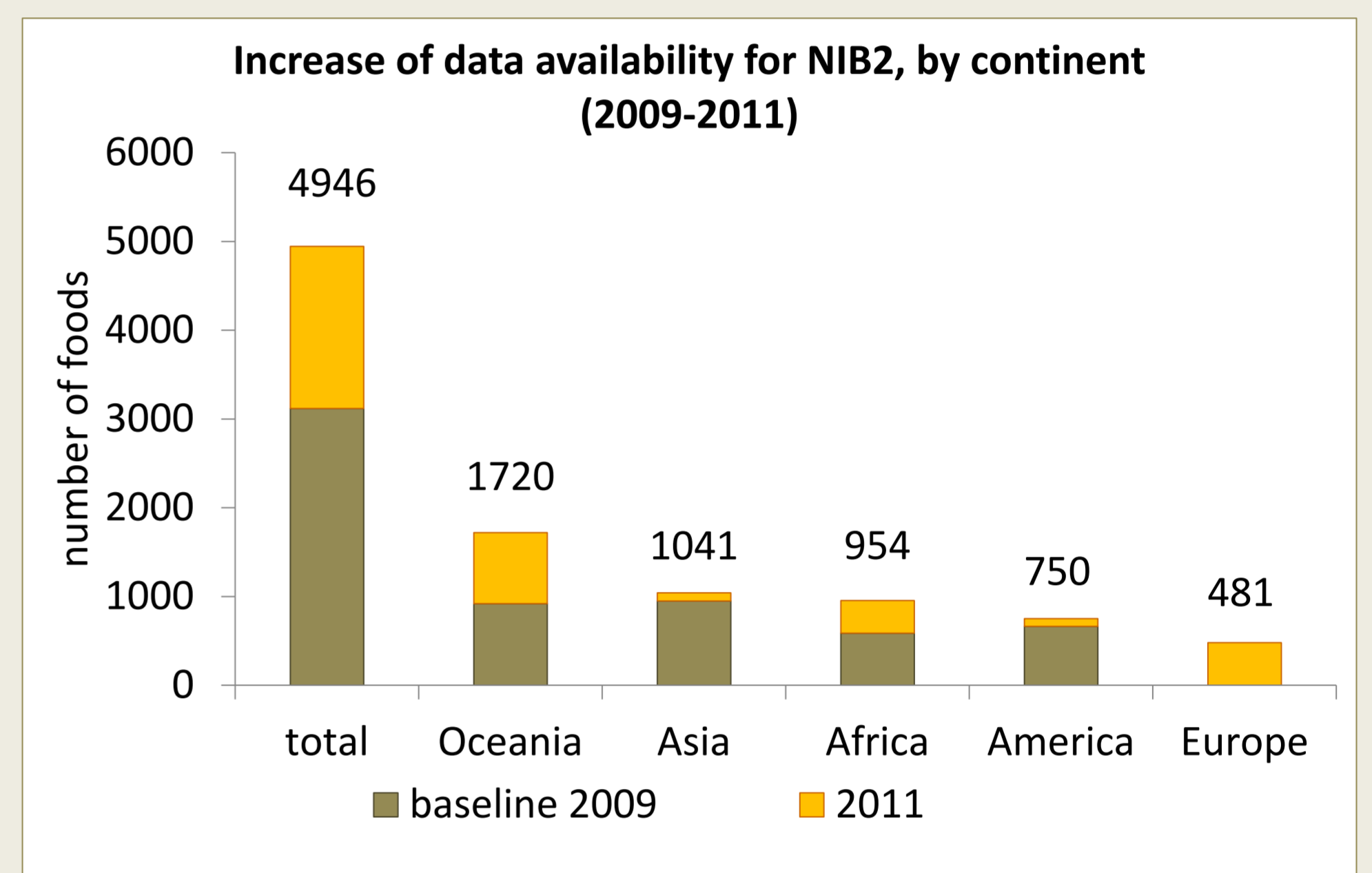


Fig.3: Number of foods counting for NIB2 between 2009 and 2011 categorized by continent.

Results

Since the baseline count in 2008, which captured 5900 foods, the total amount of foods for NIB1 almost tripled by 2012 (Fig.1). A trend of data sources can be noted, indicating that since 2009 most data were reported in peer-reviewed journals, while food composition tables/databases (FCT/FCDB) and other literature became less relevant (Fig. 4).

The **update of 2012** showed the following characteristics:

- Most data came from America (44%) and Asia (22%), the least amount from Oceania (1%) (Fig.2).
- Foods with 2-9 or 10-30 component values counted each for 43% of the added foods (Fig.5).
- Most foods were identified at cultivar/variety/breed level or categorized as underutilized (Fig.6).
- The majority of foods belong to the food groups cereals (28%) and edible insects (26%), as a result of specific investigations.

Many of the compositional data were compiled and published through the **FAO/INFOODS BioFoodComp**.

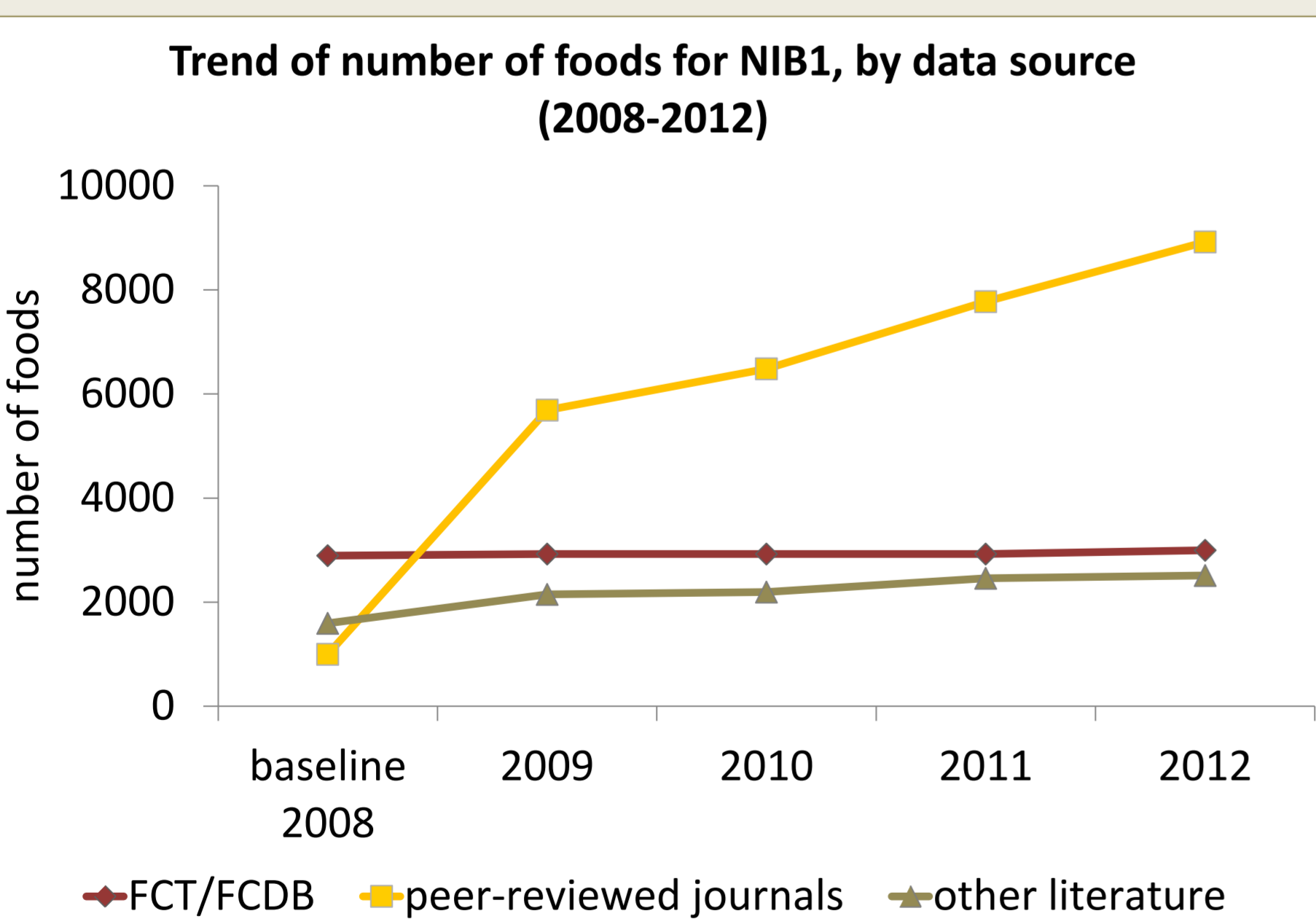


Fig.4: Trend of the number of foods counted for NIB1 between 2008 and 2012 categorized by data source.

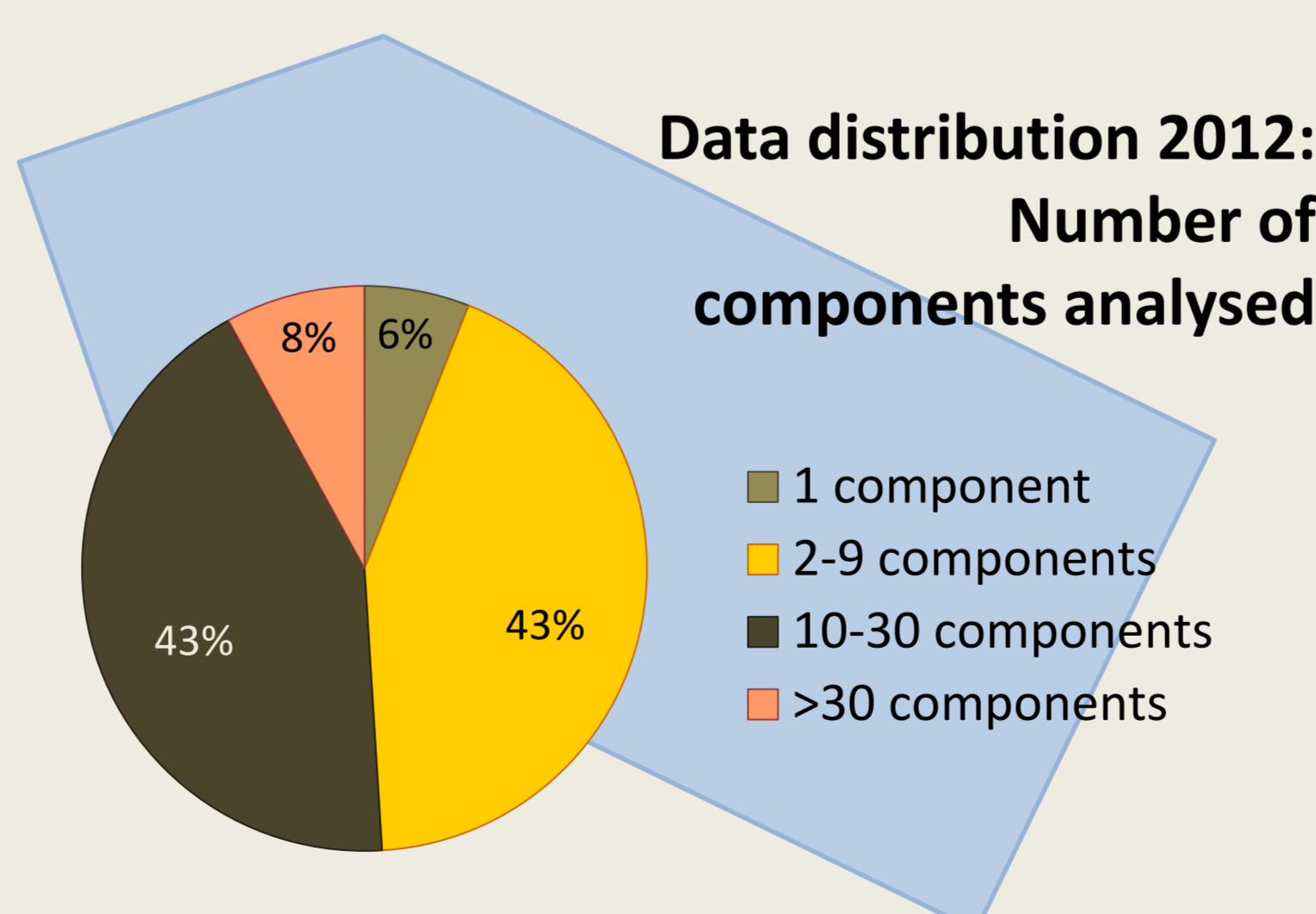


Fig.5: Number of foods counted in 2012 for NIB1 categorized by the number of components analysed per food (1, 2-9, 10-30 and >30 component(s)).

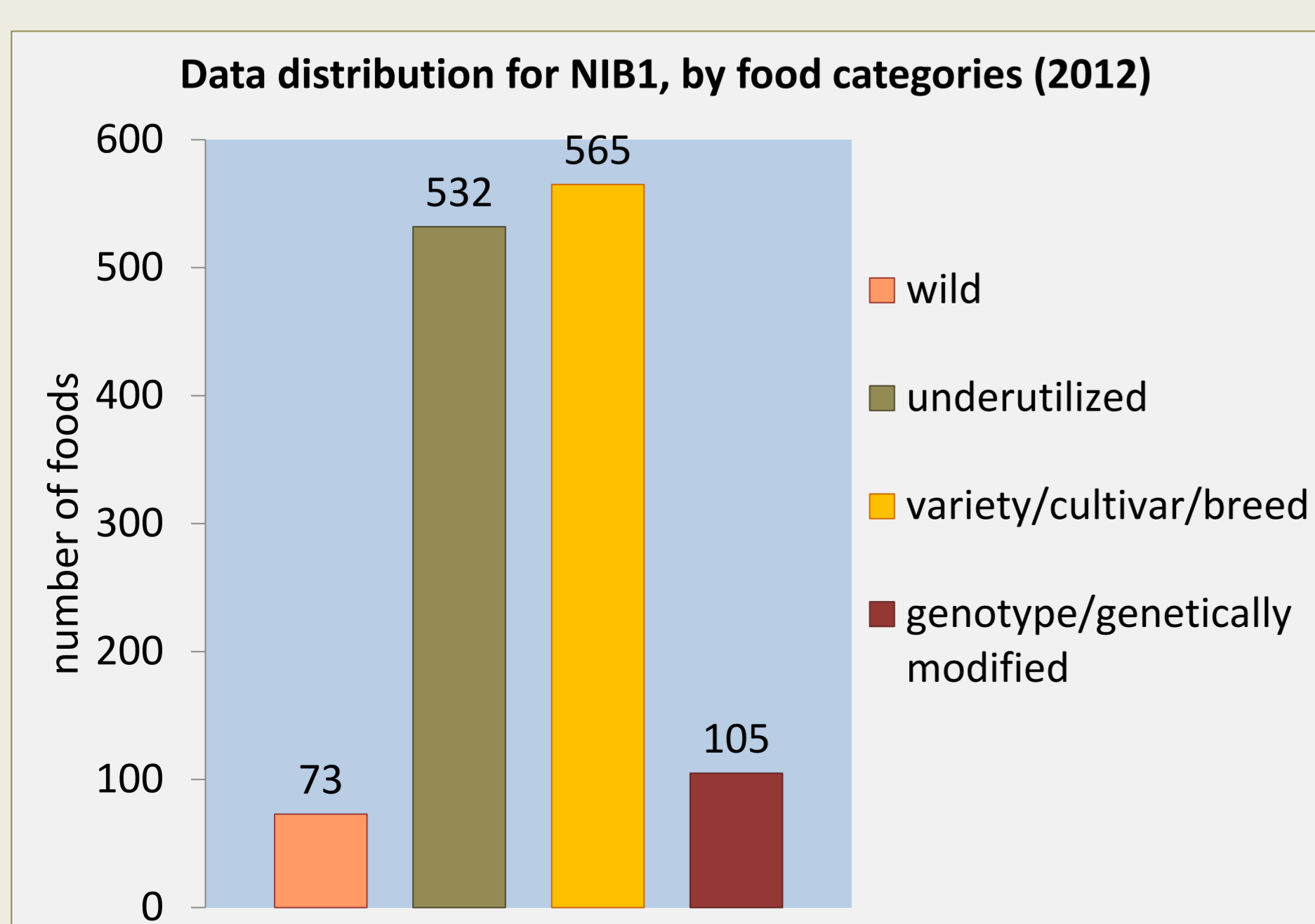


Fig.6: Number of foods counted in 2012 for NIB1 categorized by food category (variety/breed/cultivar, genotype/genetically modified, wild and underutilized).

Results

The update of NIB2 in 2011 showed an increase from about 3100 (2009) to nearly 5000 (2011) and indicated that most data are from small scale studies from Oceania and Africa.

- A specific search conducted in **2010** on wild meat/bush meat revealed that adequate instruments are missing to capture consumption on these foods. Most data were published between 1970-1990, mainly coming from African countries.

- In **2011**, a general data investigation was carried out. Most data were on wild, edible plants, captured through interviews and surveys investigating on traditional knowledge of wild and underutilized edible plants.

Conclusion

NIB1

- The amount of data is steadily increasing.
- A wider spectrum of foods and components need to be analyzed.
- More data on biodiverse foods need to be published in national/regional food composition tables/databases.

NIB2

- Adequate survey design and tools are needed to capture consumption on biodiverse foods.
- A more targeted search needs to be conducted.

Data suggest:

- raising interests and efforts to collect and disseminate data on *traditional varieties/cultivars/breeds, wild and underutilized foods*; and
- an increasing awareness of food biodiversity and its importance for food and nutrition security.

